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Using Blackboard Administered Precourse and Post course Tests to Assess Student Readiness to Learn and Change in Knowledge

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Students arrive at classes with a varying social situations and course subject knowledge. Blackboard is a web based course delivery program that permits testing of students before arriving at the first class. A pretest was used to assess preexisting subject knowledge(S) and a survey was used to assess non-subject (N) factors that might impact the student's final grade. A posttest was administered after all content was delivered and used to access change in S. Methods: A Blackboard administered examination was used with 38 final exam style questions to estimate S and 8 survey questions to estimate N. Following the delivery of the course (but before the final examination), the students were retested on Blackboard over the same 38 pretest C questions. Students were rewarded for participating with a 10 point quiz grade. 87%(66) of students completed both evaluations. The ASCII data from Blackboard was downloaded and parsed using Basic programs and summarized using Excel, Word or Mathcad. S was estimated by the pre-post test difference and N data responses were related to final grade scores. Results: The sampled N factors associated with grades above the average were: high scores in other classes, great enthusiasm, previous training in the subject, and/ or a part time job. Factors associated with grades below the average were: potential for divorce, sick parents, major illness in a family member. Grade expectancy, learning strategies, child care issues had minimal effect. The S pretest scores averaged 34% while posttest scores averaged 49% (P=>.000). Question ease by discrimination regression slopes and intercepts were different (P<0.05). Conclusions: Web administered pretests/postests may provide information about S learning and what N influence students grades. This information may be useful for tailoring course materials and assisting students.